HITCHCOCK'S MACHINE TOOL LIST

A Reference Book of Important Machine Tools

A. H. HITCHCOCK

Do You Use this Method in Your Shop?

"In his experience all his friends relied;
Heaven was his help, nature was his guide."

Some kinds of labor are a pleasure, but once let a mechanic use a **Greenerd Arbor Press** and he will never again with satisfaction pound a mandrel with a hammer.

The use of a **Greenerd Arbor Press** is a step forward. The **Greenerd Arbor Press** stands for a better method; stands for civilization, economy in time and shop room.

Sent on trial to prove that which we claim is true

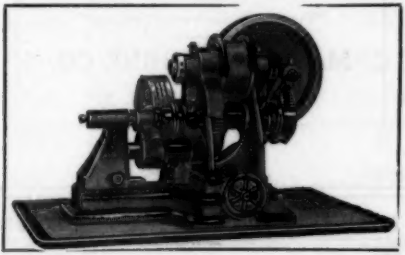
EDWIN E. BARTLETT, 360 Atlantic Ave., Boston.

THE

"Acme"

Semi-Automatic

Screw Slotting Machine



FOR slotting all styles of brass, iron and steel screws. Speed limit is cutting capacity of the saw. Interchangeable discs for different diameters.

SHIPMENT FROM STOCK

The National-Acme Mfg. Co.

Cleveland, Ohio, U. S. A.

Branch Offices: New York and Chicago

FOREIGN REPRESENTATIVES:

Alfred H. Schutte ***Schuchardt & Schutte***

If you require anything special in a machine tool to reduce your labor cost you cannot do better than to let us know about it.

"Two heads are better than one"

MASSEY MACHINE CO.
101 PEARL ST.,
WATERTOWN, N. Y.

The Capacity for Work

of the **MERRELL Pipe Threading and Cutting Machines**—and this combined portable hand and power Merrell in particular is unlimited. Remove the head from the base and use as a portable hand machine if you wish. It will cut any kind of pipe. Equipped with our standard quick opening and closing die-heads, improved cutting-off knife and new self-centering vise, this **Merrell** will do more work in an easier, quicker and better manner than other machine.

As we make nothing but pipe threading machines, we can guarantee each and every part of this machine to do its full share of work and not shirk. That's why we can afford to give it to you **free** for a month's trial.

Isn't that inducement enough? Will you write today?

THE MERRELL MFG. CO., : : Toledo, O., U. S. A.

BRING YOUR

KEY SEATING

to the **drill press** and let a boy do the work in **one-quarter to one-half the time** required by any other method.

Cheapest in Their First Cost

Save 50 to 75 Per Cent in Time

OUR KEY SEATING TOOLS

enable any drill-press hand to cut key seats much faster and cheaper than the work can be done in any other way. These tools are simple and durable, and inexpensive in cost and operation. The keys require no fitting, for every seat is exactly alike. The same tool makes both straight and taper key seats, as well as oil grooves.

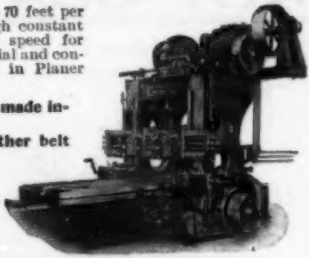
An interesting pamphlet sent on request

National Machine Tool Co.

208-10 Lawrence St., Cincinnati, O.

Cincinnati Variable Speed Planers

Give you from 15 to 70 feet per minute, with a high constant return. A proper speed for every kind of material and condition. The ideal in Planer construction.



Changes can be made instantly.

Adaptable to either belt or motor drive.

An increase in output of from thirty to fifty per cent.

Catalogue?

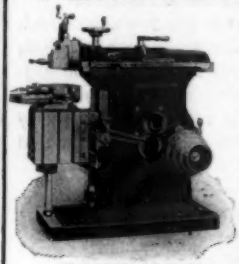
Cincinnati Planer Co.

Cincinnati, O., U. S. A.

A CRANK SHAPER THAT YOU CAN DEPEND ON

THE CINCINNATI BACK GEARED

We **know** what this tool will do and the severe service it will stand, because every bit of it is made with the single object in view of producing a thoroughly reliable machine in every point —reliable not only in capacity for the best and fastest work, but in the ability to do such work continuously where the requirements are heavy. It is good all through—as good as we know how to make it, and our knowledge of shapers and our ability to make them right is the outcome of a good many years' experience.



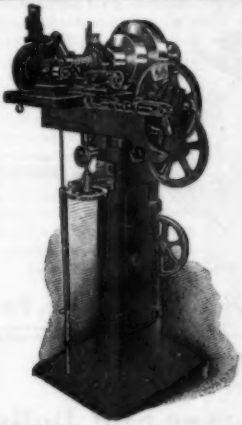
No. 1610—16 inch.

We have put some of the things we know about shapers into our book, which we would like to send you. May we?

THE CINCINNATI SHAPER CO.

Colerain Ave. & Elam St., CINCINNATI, O.

AUTOMATIC
GEAR CUTTERS



We build:

No. 1 Size
Capacity ⅛ to 5 inch diameter, 16 pitch and finer.

No. 2 Size
Capacity ⅛ to 8 inch diameter, 12 pitch and finer.

Semi-Automatic
Capacity ⅛ to 3 inch, 24 pitch and finer.

No. 11 Universal
For both bevel and spur gears.

THESE machines are used to cut tool steel reamers, milling cutters, needle and screw slotting saws; on machine steel and brass, for cutting variety of spur gears, pinions, segments, lock parts, typewriter feed and escape wheels, scale pinions, gearings in phonographs, graphophones, gas and water meters, time clocks, fish reels, etc. We claim that for work within range, we can turn out more in quantity and better work than on any other machine on the market.

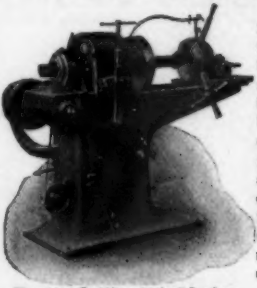
Send for New Catalogue G 6

Dwight Slate Machine Co.
Hartford, Connecticut

THEY ARE SATISFYING

Pipe Threading Machines

Because They Are Practical



No. 1½, Cutting ½ to 3 Inches.

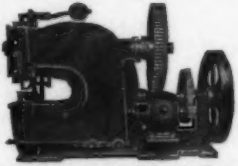
The Williams tools would not make good parlor ornaments, because they are not built that way; but in the machine shop they look like **business.** They are built by practical men of long experience, who believe in adding to that experience a careful study of modern conditions. The result is a full line of pipe threading tools that meet the severest requirements of up-to-date users. ***Descriptive Circular?***

WILLIAMS TOOL CO. . . Erie, Pa.

"CINCINNATI"

Punches, Shears and Rolls

Belt, Engine and Motor Drive



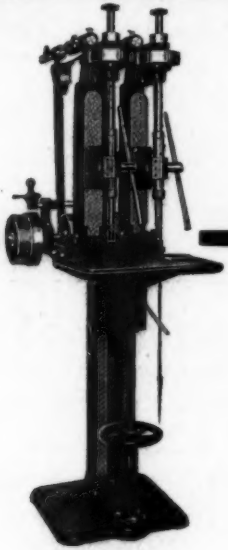
Improved Standard Single Punch.

If you use machines for punching, shearing or rolling, you should study the improved features we show in these tools.

New Catalogue on Request

The Cincinnati Punch & Shear Co., Cincinnati, O.

Get Our Catalogue



(PATENTED.)

IT will give a list of prominent manufacturers using from one to two hundred spindles each, any one of which can be referred to for confirmation of the extraordinary statements made about our BALL-BEARING DRILL PRESSES.

Order a machine. The first order will certainly be followed by others up to your requirements.

The Henry & Wright Mfg. Co.

111-135 Sheldon St., Hartford, Conn.

MILLING SAWS

You will know something of the best saws only when you use material that is built the best the builders know. We have built good saws for forty years.

CHAMPION SAW CO.
BEAVER FALLS, PA.

When You Inquire

of advertisers herein, won't you kindly remember to say somewhere in your communication that the inquiry comes from Hitchcock's Machine Tool List? Advertisers are humam; they like to know that the medium in which they spend their money is received and consulted by machinery users. Not being mind readers, they can only know this when you tell them, and if you neglect to tell them, the Tool List is deprived of credit for the service it has rendered.

HERE'S A

New Yankee Drill Grinder

Combined With Our Swinging Grinder

WE have other combinations, as, for instance, with plain, surface, cutter and reamer grinders. In fact, we have, among nearly fifty different styles, sizes and combination grinders to suit **any** kind of shop.

NO ONE CAN REALIZE

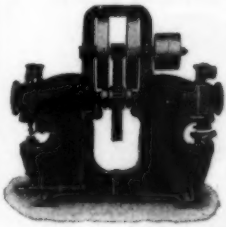
without the actual experience, how much more, better and quicker work a **properly** ground drill will do. Why, it's amazing. You may now think your men do well enough by hand, but if you had once used our machines you **wouldn't think** of ever trying to grind them by hand again.

CATALOGUE?

WILMARTH & MORMAN CO.

575 Canal Street : GRAND RAPIDS, MICH.

NEW DOTY
Punches and Shears



Double End Punches and Shears

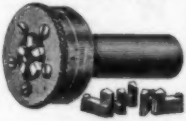
MANUFACTURED BY

THE NEW DOTY MFG. CO.
JANESVILLE, WIS.

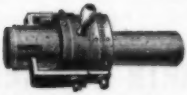
IF YOUR IDEA OF ECONOMY IS QUALITY

Try the Geometric Tools

They are the best threading, tapping and milling tools on the market. Send samples and **let us estimate** on a suitable equipment of tools to cover your requirements.



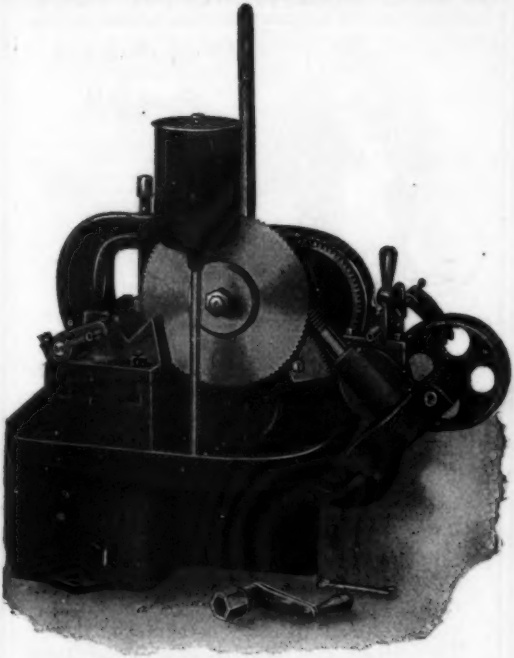
For sale by all screw machine manufacturers and representative dealers.



Write us your requirements and we'll send information and estimates.

THE GEOMETRIC TOOL CO., New Haven, Conn.

No. 1 Metal Saw



Will Cut 3¼ Inch Steel Bars in Five Minutes

Compact, simple, accurate; no noise or vibration; anyone can run it; nothing to get out of order; powerful drive; the kind you need.

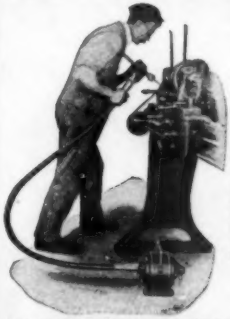
Write for Descriptive Circular

Cochrane-Bly Co.

118 St. James St., ROCHESTER, N. Y.

Metal Sawing Machines..Filing Machines..Saw Sharpening Machines

HERE'S SOMETHING YOU NEED



Electrically Driven

Breast Drill

A most convenient little outfit that will save its cost, and more too, a dozen times a year. The breast drill is light and efficient, and the flexible shaft gives it such a wide range of application that it may be used anywhere. The drill may be stopped and started without stopping the motor. Speed reduction ratio is six to one.

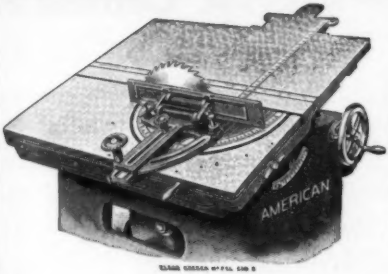
Send for
Book No. 199

COATES CLIPPER MFG. CO., Worcester, Mass.

Sellers of Machinery

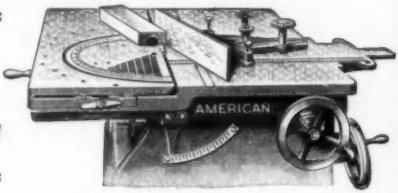
which is used in machine shops of any kind, should investigate carefully the facilities offered by **Hitchcock's Machine Tool List** for reaching this trade in all parts of the country. Its 25,000 circulation—one copy to each shop—covers this field with a thoroughness and effectiveness not equalled by any other advertising medium.

American Universal Saw Bench



Accurate
Handy
Reliable
Adaptable

Pattern
Shop
Machinery



American
Wood-
Working
Machinery
Co.,
New York
Chicago
New Orleans

A Common se V

IF you want a man to know some particular fact, the way to be sure that he will know it is to go directly to him and tell him. If you wait for him to come to you and ask for the information, there are a whole lot of chances that he may not come.

So in advertising. If you want information about your goods to reach a man, send it to him; don't depend altogether on his paying somebody else to fetch it. He may forget to send.

The underlying idea of the booklet in which this is printed is that the first essential in advertising is to get to the buyers and to all of them. So it is mailed every month to those people in the United States and Canada who use machine tools. It goes directly to the buyers, and tells them what the advertiser wants them to know, bringing the information to thousands who would never see it if they had first to buy the publication in which it was printed.

Th
Tool
mach
buy i
form
tively
abilit

Its
subst
to sho
princi
it mee
tool u
matio
such
shape.

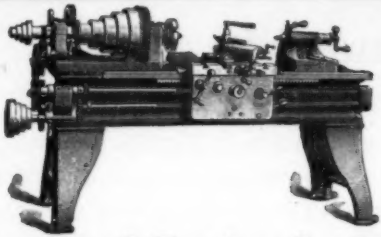
Is it
Adver
effecti
econon
improv
ation o

e View of It.

The sole function of Hitchcock's Machine Tool List is to disseminate a knowledge of machinery in market among those who must buy it if it is bought, and it is able to perform this service more thoroughly and effectively because it possesses and professes no ability to do anything else.

Its conspicuous success as a producer of substantial returns for its advertisers goes to show not only that it works on the right principle and along practical lines, but that it meets and supplies a distinct demand from tool users—a demand for just such information as is given in its pages, in just such compact, convenient, easily available shape.

Is it not a common sense proposition, Mr. Advertiser, that such a highly specialized, effective medium is just as necessary for economical advertising as your own modern, improved machine is to the successful operation of an up-to-date machine shop?



Standard Engine Lathes

16 to 24 Inch Swing

—BUILT BY—

Greaves, Klusman & Co.

N. E. Cor. Cook & Alfred Sts., Cincinnati, O., U. S. A.

ALSO BUILDERS OF

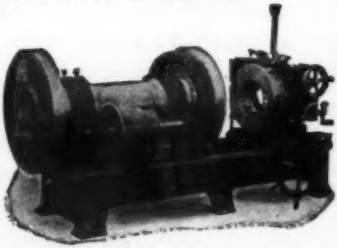
Pattern Makers' Lathes & Machinery and Metal Spinners' Lathes

Pipe Threading Machines

From 1-4 to 18 Inches

We are builders of the well known

Peerless, P. D. Q. C. and Duplex Machines



Let our circulars tell you why they are well known

BIGNALL & KEELER MFG. CO.

EDWARDSVILLE, ILL.

Multi-Cabinet SYSTEMS

You can't afford to waste your brain energy with annoying routine—lost correspondence—confused records and accounts. That's mere carpenter work. Make your system take care of it. Use your own gray matter for the real creative—the business-building—the architect work. Put the letter-hunting—the record-keeping—the business routine—the business detail on Multi-Cabinet Systems.

Multi-Cabinet Systems are not so many pounds of senseless oak and card stock. Each individual cabinet represents so much **brain**—so much **business experience**—so many labor-saving schemes and economies—**moulded** into cabinet form. They are mechanical business assistants; automatic private secretaries that take care of all the business detail—handle the correspondence—keep the records—and relieve you of the petty matters that interfere with brain work.

But our book describes these systems better than we can—tells of 47 simple, economical time and labor saving methods of handling detail, systems, for every department of your business—advertising—selling—credits and factory work, and if you do not find in these 47 systems one that meets your own needs exactly—we get up a special one for you. But first let us send you the book describing this complete line of "grow as you grow" Multi Cabinet Business Systems.

47 SYSTEMS FOR BUSINESS MEN

Representatives in 90 Cities

151-153 Wabash Av.
CHICAGO

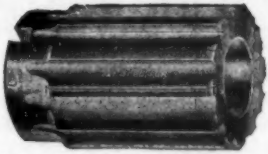
Factories: Muskegon, Mich.

SHAW & WALKER

REDUCE LABOR AND COST

Matthews Core Drills and Reamers

High Speed With Long Service



The actual efficiency of these tools in every day operation may be safely stated at from five to six times that of carbon steel tools; they do that much more work, because they run faster on heavier feeds. They will make a record for economy in your shop, just as they have in others, and by the same token will save your money. Why not let them begin now?

Write for Bulletin No. 4

THREE RIVERS TOOL CO. : Three Rivers, Mich.

Woodworking Machinery

If you are in search of machinery for working wood, write to the publisher for a copy of **The Machinery List,** containing the advertisements of all the leading manufacturers of wood-working tools, as well as complete lists of second-hand machinery in market. Mailed **free**, on receipt of request, to anybody, anywhere on earth.

A. H. HITCHCOCK, : : Publisher
626-627 Monadnock Block, CHICAGO, ILL.

CLINCH CLIPS

15¢ per 1000 IN QUANTITIES

The Best Paper Clip on the Market

250 lots, 10c, postpaid; 1,000 lots, 30c, postpaid; 5,000 lots, $1.25, postpaid; 25,000 lots, 15c per 1,000, f. o. b. Buffalo; 100,000 lots, 12½c per 1,000, f. o. b. Buffalo.

STEEL DIE
EMBOSSED STATIONERY

For business use at prices not much higher than type printing. Let us send you our specimen book, containing 100 samples.

American Embossing Co.
401 SENECA BLDG. **Buffalo, N. Y.**

WE doubt if there is any machine that will cut off the ends of stay bolts one inch in diameter, as neatly as

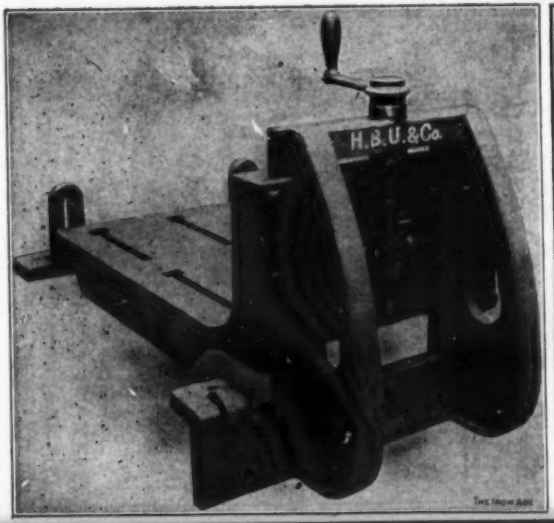
SCHOFF'S STAY BOLT CUTTER

It isn't an easy job, mind you, but it does it better than any other tool we know of. You ought to try it.

Send for Catalogue

STOW FLEXIBLE SHAFT CO.

Callowhill & 26th Sts., PHILADELPHIA, PA.



PORTABLE TOOLS

BORING ATTACHMENT
FOR LATHE

Converts lathe into a horizontal boring mill, to which, within its range, it is equal in quality and quantity of output. Made for any size lathe, easily attached and true with carriage in all directions; has adjusting screw for raising and lowering bed which carries work. An inexpensive time and labor saver.

Write for more information about this and other PORTABLE TOOLS

L. B. Flanders Machine Works
ESTABLISHED 1870.

H. B. UNDERWOOD & CO.
Proprietors
1022 Buttonwood St., : Philadelphia

Second-Hand Machinery.

Lists of second-hand machinery, either for sale or wanted, will be published under this heading at the rate of **40 cents a line**, across the page, each issue, with a minimum charge of **$4.00.** Sub-headings are counted as one line, but the name and address of advertiser are not included in the space charged for. Prices and full descriptions of the machines listed will be furnished by the parties offering them for sale. If you do not find what you require, use the slip inclosed with each book to make known your wants to the publisher.

FOR SALE BY

Wm. C. Johnson & Sons Machinery Co.

210-212 Washington Ave. . . . St. Louis, Mo.

Gear cutter, Brainerd, automatic, 36 in., in good order.
Planer, Gleason, 48x48 in. x 16 ft., with 2 heads, in good order.

FOR SALE BY

Frevert Machinery Co., . . . 18 Dey St., New York City

60 in. x 40 ft. Pond lathe, modern, as good as new; immediate delivery.
Other second-hand and new tools.

FOR SALE BY

Bosworth, Dilley & Holding Co., 735 Rockefeller Bldg., Cleveland, O.

Boring mill, Baldwin, 1 head, 7 ft.
Heaters, feed water, new and second-hand.
Lathe, 96 in. swing, 14 ft.
Milling machine, Kempsmith No. 9, plain.
Planer, Bement, 4 heads, 72x72 in. x 24 ft.
Planer, Ferril, 2 heads, 96x84 in. x 16 ft.
Planer, Putnam, 4 heads, 60x60 in. x 12 ft.
Shaper, Walcott, 26 in.
25 Steam pumps, assorted sizes.

FOR SALE BY

The W. M. Pattison Supply Co., 197 St. Clair Av., N. E., Cleveland, O.

Boring mill, Betts, vertical, 6 ft., with 2 swivel heads, uprights set back to allow swing of 100 inches.
Boring machine, Niles, vertical, 60 in.
Hammer, helve, Bradley, 25 lb.
Hammer, helve, Bradley, 80 lb.
Hammer, steam, Bell, 700 lb.
Lathe, turret, American Tool & Machine Co. No. 2.
Planer, Lathe & Morse, crank, 12 in.
Planer, Gray, 22x22 in. x 5 ft.
Planer, Gleason, 28x28 in. x 9 ft.

FOR SALE BY

H. B. Stimson, . . 137-139 Washington St., Buffalo, N. Y.

Boiler, vertical, 20 h. p.
Blower, Buffalo No. 8, 14 in. outlet.
Compressor, air, belt driven, 6x6, with tank and hammers.
Engine, gas, Olin, 25 h. p.
Engine, steam, Nagle, automatic, 8x10.
Engine, steam, Nagle, automatic, 9x12.
Exhaust fan, Sturtevant No. 6, 11 in. outlet.
Exhaust fan, Champion No. 9, 13 in. outlet.
Lathe, automatic, boring and grinding, 24 in. swing, 38 in. centers, chuck.
Pumps, steam, different sizes.

SECOND-HAND MACHINERY

FOR SALE BY

C. C. Wormer Mach'ry Co., 94-96 W. Woodbridge St., Detroit, Mich.

ENGINE LATHES.

16x10, Dexter, hol. spdle., cp. rest.
18x8, Rahn, M. C., h. spdle., cp. rest.
19x8, Star, hollow spindle, plain rest.
20x12, Pond, compound rest.
24x12, New Haven, plain rest.
26x12, New Haven, plain rest.
32x16, Enterprise, compound rest.
38x16, Fifield, compound rest.

TURRET LATHES.

12 in. x 3 ft. 8 in., hol, spdle., 6 holes.
13 in. x 5 ft., ¾ in. hol. spdle., chuck.
15 in. x 5 ft., pilot wheel, auto. stop.
16 in. x 4½ ft., W. & S., pl. hd., h. sp.
16 in. x 6 ft., Fox, bk. grd., s.-o. tur.
18 in. x 6 ft., Hendey, plain head.

SPECIAL LATHES.

14x11, single head axle, 8 ft. centers.
31x9, Buckeye, chucking, bk. geared.
84 in., pit, dbl. bk. geared, 6 ft. spdle.
39x16, 28 in. wide, column facing, with hydraulic hoist.
52x36 in. centers, facing, back geared.

BRASS FINISHERS' MACHINERY.

Boring machine, W. & S., 2½ in. bar.
Grinder, cock, 13x3½, single spindle.
Lathe, speed, T. S., 11x3 ft. set-over.
Lathe, tur., Am. No. 1, Fox, 18 in. s.
Miller, valve, American No. 0.
Miller, valve, W. & S., 2 spindle.

DRILLS.

20 in., W. & L. feed, square base.
26 in., sta. head, bk. gd., drill press.
36 in., sta. head, bk. gd., drill press.
36 in., radial, Fosdick, tap. attach.
36 in., radial, gang, back geared.
48 in., radial, Betts, back geared.
54 in., radial, Niles, back geared.
Garvin No. 3, sensitive, 4 spindle.
Harrington No. 1, suspens'n, bk. gd.
Morse No. 2, sta. spindle, taper.
No. 2, sensitive, 3 spdle., sta. spdle.
Thom-DeH., hand feed, portable.

HAMMERS.

100 lb., board lift, Stiles.
200 lb., steam, Bement, single frame.
400 lb., board lift, Bliss, four poppet.
450 lb., steam, Bell, standard.

PLANERS.

29 in. x 14½ ft., plate, Sellers.
48 in., Betts, widened to 72 in., 20 ft. bet. pockets, single hd., power feed.
52 in., Betts, wd. to 54 in., 24 in. table.
24x24 in. x 5 ft., Powell, single head.
16 ft., Niles, boiler plate.

PRESSES.

Long & A. No. 6, gd. punch, 1 in. st.
No. 51, plain, power, blanking and f.
Greenerd No. 2½, arbor.
Double column, geared, 3 in. stroke.
Stiles No. 2, stamping, 6 in. throat.
Stiles No. 5, 10 in. throat.
Toledo No. 17, 20 in. throat.
Toledo No. 52, horning and wiring.

SHAPERS.

24 in., Hendey, friction drive pillar.
12 in., Hendey, geared rack.
16 in., Gould & E., single gd. crank.
16 in., Gould & E., back gd. crank.
22 in., Lodge & Davis, geared rack.
22 in., Walcott, geared rack.

GRINDERS.

Norton, plain, 18x96 in., like new.
Buffalo, knife, auto., 32-38-44 in.
Diamond No. 2, wet tool.
Huntington No. 26, sus. dbl. end.
Barnes, water tool, 18 in. wheel.
Leland-F., wet, double, 22 in. wheels.

MISCELLANEOUS.

Blower, "ABC," type E, 28 in. outlet.
Blower, Root No. 6, hor'l, rotary.
Brake, power, Dreis & K., cap. 6 ft.
Chain block, Yale & T., 8 ton, gd.
Cold saw, metal, Baker No. 1, cap. 3x6.
Crane, 5 ton capacity.
Crank turning mche., cap. up to 7 in.
Cutting-off mche., Pratt & W., 2 in.
Cylinder boring & facing mche., 28 in.
Die chamfering machine, Hartford.
Drill, Elmore, rock, hand.
Exhauster, Sturtevant, 70 in., steel p.
Fan, 200 in., ¼ housed, steel plate.
Forming mche., Pocock, dbl. bk. gd. s.
Gas furnace, American No. 6.
Hammer, Boyer No. 1, chipping.
Hammer, Boyer, rivet, long stroke.
Keyseater, Mitts & Merrell No. 2.
Profiling machine, Garvin.
Rolls, boiler shop, 6 ft. 6 in.
Rolls, hand power, 31 in. bet. hsgs.
Screw slotter, Garvin, rotary.
Seamer, Bliss No. 3, double.
Sprue cutter, Bliss No. 297, ft. pwr.
Tube cutter, on column.
Tube cutter, Fox No. 4, multiple.
Valve reseater, Morse & D. No. 6.
Wire straightener, auto., ⅛ in. adt.

Cuts or photos with detail of any of the above on application.

SECOND-HAND MACHINERY

FOR SALE BY

Marshall & Huschart Machinery Company,

62-66 S. Canal St., Chicago. 1024-25 Chemical Bldg., St. Louis.

BOLT CUTTERS.

2 dble. head, 1¼ and 1½ in., auto. stop. | 2 in., Sellers.

DRILLS.

20 in., Mechanics No. 2.
24 in., Barnes, back gear.
24 in., Blaisdell, sliding head, back gear.
28 in., Gibson, sliding head.
30 in., Bickford, back gear.
Pratt & Whitney No. 1, 2 spindle.
Garvin No. 3, 4 spindle.
Redington, 3 spindle, sensitive.
Chicago No. 14, pneumatic.

GRINDERS.

Sellers, tool.
Springfield, surface, table 24 in x 7 ft.
Special surface, table 16x10 in.

HAMMERS.

100 lbs., American, post.
500 lbs., Williams & White, drop.
1500 lbs., Bell, single frame, steam.
6000 lbs., Morgan, doub. frame, steam.

LATHES.

13x5, Silk-Anderson, plain rest, hollow spindle.
14x5, Goddard, rise and fall rest, hollow spindle.
14x6, Fish, compound rest, chuck.
14x6, Flather, plain rest, hol. spdle.
14x6, LeBlond, plain rest, hollow spindle.
14x6, Putnam, rise and fall rest, solid spindle.
14x6, Fitchburg, comp. rest, solid spindle.
14x6, Lodge & Shipley, plain rest, hollow spindle.
16x6, Fifield, rise and fall rest, hollow spindle.
17x6, Jones, rise and fall rest, solid spindle.
18x8, Fuller, plain rest, solid spindle.
18x10, Miller, plain rest, hol. spdle.
19x6, Fifield, rise and fall rest, solid spindle.
19x8, Gray, comp. rest, solid spindle.
19x12, Lodge & Davis, comp. rest, hollow spindle.
20x12, Fifield, comp. rest, solid spdle.
21x8, Barnes, comp. rest, solid spdle.
22x10, Pond, comp. rest, solid spdle.
26x12, Putnam, plain rest, hol. spdle.
28x13, New Haven, comp. rest, solid spindle.
32x14, Putnam, compound rest, solid spindle.
54x19, compound rest, solid spindle.
18x42x9-12, Putnam, sliding gap.
60 in., face plate.

PULLEY LATHES.

26 in., Stevens.
36 in., Niles.
48 in., Stevens.
60 in., Niles.

MILLING MACHINES.

Pratt & Whitney No. 2, Lincoln.
B. & S. No. 2, hor. and vert., slab.
Kempsmith No. 3, back gear.
Brown & Sharpe No. 12, plain.

PLANERS.

20x24 in. x 8 ft., Pratt & Whitney.
26x26 in. x 6 ft., N. Y., steam engine.
30x30 in. x 8 ft., Wilson, 1 head.
42x36 in. x 10 ft., New Haven, 1 hd.

SCREW AND TURRET MACHINES.

Pratt & Whitney No. 2, screw.
1 in., Spencer, automatic, screw.
24 in., American, turret lathe.
1 in., Cleveland, automatic, screw.
2½ in., Cleveland, automatic, screw.

SHAPERS.

18 in., Flather.
22 in., Walcott.
24 in., Gould & Eberhardt.
26 in., Walcott.

MISCELLANEOUS.

Axle centering machine, Bement.
Axle cut-off lathe, Bement.
Blower, exhaust, 35 in.
Brazing table.
Gear cutter, Gould & Eberhardt, 22 in., hand.
Gas cyanide furnace, No. 3.
Nut machine, Blakeslee, 1 in., and furnace.
Oil separator.
Profiler, Garvin.
Vertical furnace.

SECOND-HAND MACHINERY

FOR SALE BY

Western Machinery Co., . . . 91 Perin Bldg., Cincinnati, O.

C. H. Norton, Manager.

Air compressor, Laidlaw, 10x10x10 in., nearly new, $450.

15 Engine lathes, Blaisdell, Lathe & Morse and Steptoe, friction countershafts, etc., complete, from 16 in. x 7 ft. up, $140 to $200.

Hoisting machine, gasoline, Fairbanks, 6 h. p., on wheels, lifts 1,400 lbs., nearly new, $275.

Milling machine, Newton No. 4, complete, $400.

Planer, Sellers, 36x36 in. x 14 ft., spiral drive, two heads, $1,000.

10 Speed lathes, $25 each.

4 Turret lathes, Lodge & Barker, not back geared, $90 each.

Boilers, engines, steam and electrical equipment and supplies.

We have just purchased the business of Jas. T. Cochran, Cincinnati.

FOR SALE BY

Brown & Zortman Machinery Co., . . Pittsburgh, Pa.

LATHES.

14 in. x 4½ ft., Putnam, rise & fall rest and chuck.
16 in. x 6 ft., Harrington, comp. rest.
16 in. x 6 ft., Johnson, turret, turnstile feed.
18 in. x 10 ft., Schumacher & Boye, compound rest.
24 in. x 12 ft., Lodge & Shipley, engine, complete with chuck.
24 in. x 14 ft., Gleason, comp. rest.
24 in. x 12 ft., Clement, pattern.
26 in. x 14 ft., Gleason, comp. rest, taper and chuck.
26 in. x 16 ft., Gleason, comp. rest and taper.
36 in., Putnam, pulley, dbl. carriage.
38 in. x 16 ft., Fifield, comp. rest.
16 in. x 8 ft., Putnam, axle, single end.
26-44 in. x 10 ft., McCabe, double spindle.

PLANERS AND SHAPERS.

28 in., Juengst shaper, horiz'tl lever crank, table support.
28 in., Lodge & Davis shaper, rack.
32x32 in. x 7 ft. 6 in., Rochester Machine Tool Co. planer.
42 in. x 18 ft., Betts planer, 1 head.

DRILLS.

Garvin No. 2, 3 spindle, gang.
Garvin No. 3, 4 spindle, gang.
Silver, 16 in., post, hand or power, with power feed and countershaft.
Barnes, 25 in., power feed, bk. gear.
Bement-Miles, 6 spindle, arch bar.
Dresses, 5 ft., radial, full universal.
Fosdick, 3½ ft., radial, plain.

CRANES.

5 ton, hand power, traveling, 15 ft. 9 in. span, with rails.
5 ton (2), single, I-beam, jib.
4 ton, single, I-beam, jib.
1½ ton, single, I-beam, jib.

MILLING MACHINES.

Milling machine, keyseat, Mitts & Merrill No. 2.
Miller, plain, Garvin No. 4½.

MISCELLANEOUS.

Blower, Sturtevant No. 5.
Bolt cutter, Schlenker No. 4, double head, 1½ in.
Boring mill, Pratt & W., horizontal, double head, 36 in. x 14 ft.
Cold sawing machine, Westinghouse.
Cutter and reamer grinder, universal, Cincinnati No. 1.
Emery grinder, double, Lancaster, 14 in. wheels.
Engine, gas, vertical, 6 h. p.
Engine, steam, Climax, auto., 10 h. p.
Engine, steam, horiz'tl valve, center crank, 15 h. p.
Engine, H. S. & G., hor. slide valve, side crank, 35 h. p.
Engine, blowing, Walker, single acting, three cylinder.
Hammer, steam, Chambersburg, steelmakers', double leg, 1,500 lbs.
Hammer, steam, Bement-Miles, single leg, 1,500 lbs.
Hammer, steam, Bement-Miles, single leg, 800 lbs.
Hammer, steam, Fox, single leg, 300 lbs.
Lathe, variety, Pringle & B., 3 in.
Pipe machine, Saunders, 4 in.
Polishing machine, curtain pole, Pringle & Brodie.
Tool grinder, wet, Springfield, 18 in.
Tool grinder, wet, Springfield, 36 in.

SECOND-HAND MACHINERY

FOR SALE BY

Hill, Clarke & Co. of Chicago, - - - Chicago, Ill.

SPEED LATHES.

10 in. x 4 ft., Diamond	$ 25
12 in. x 4 ft.	30
12 in. x 5 ft., Prentice	30

PLAIN TURNING LATHES.

13 in. x 5 ft., Pratt & Whitney	$ 65
14 in. x 4 ft., Reed	90

ENGINE LATHES.

12 in. x 4 ft., Pratt & Whitney	$ 75
12 in. x 5 ft., Ames	130
13 in. x 4 ft., Pratt & W., taper	225
13 in. x 5 ft., Blaisdell	135
13 in. x 5 ft., Prentiss	135
13 in. x 6 ft., Blaisdell	100
14 in. x 4 ft., Reed	165
14 in. x 4 ft., Blaisdell	130
14 in. x 4 ft., Reed	150
14 in. x 5 ft., Blaisdell	115
14 in. x 6 ft., Blaisdell	120
14 in. x 6 ft., Flather	150
14 in. x 6 ft., Prentice	140
14 in. x 6 ft., Lodge & Davis	190
15 in. x 4 ft., Blaisdell	130
16 in. x 6 ft., Blaisdell	175
16 in. x 8 ft., Putnam	140
17 in. x 6 ft., Blaisdell	215
18 in. x 6 ft., Flather	250
18 in. x 6 ft., New Haven	125
18 in. x 6 ft., Hamilton	315
18 in. x 6 ft., Bradford	250
18 in. x 8 ft., Hamilton	320
18 in. x 8 ft., Lodge & Shipley	325
20 in. x 8 ft., Hamilton	370
21 in. x 10 ft., Bogart	400
32 in. x 12 ft., Gleason	675

SHAPERS AND PLANERS.

16 in., Gould & E., b. g. crank	$ 280
24x24 in. x 5 ft., Whitcomb	300
24x24 in. x 6 ft., Gray	525
25x25 in. x 7 ft., Whitcomb	350
30x30 in. x 10 ft., Fitchburg	600
41x36 in. x 12 ft., New Haven	950
42x42 in. x 16 ft., Fitchburg	850
54x54 in. x 14 ft., Fitchburg	1,300
54x54 in. x 14½ ft., Sellers, 2 hds.	1,000
72x60 in. x 14 ft., Pond, 4 heads.	3,250
28 in. x 10 ft., Richards, o. side.	1,200

GRINDERS AND BUFFERS.

Brainard, bench grinder	$ 90
1½ in., Detroit	20
24 in., Barnes, water grinder	37½
24 in., Bridgeport, water grinder	50
36 in., Springfield, water grinder	60
32 in., Buffer and countershaft	17½
Diamond No. 2, bench buffer	9

MILLING MACHINES.

Reed No. 2, hand	$ 100
Becker No. 2, vertical	300
Kempsmith, hand	125
Lodge & Davis No. 3, univ	400
Brainard, 36 in., gear cutter	600
22 in. x 12 ft., Newton	1,000

DRILLS AND BORING MACHINERY

20 in., Sibley drill	$ 50
20 in., Prentice	55
25 in., Snyder drill	160
4 spindle, Barr	120
Crosby horizontal boring mill	400
Sellers cylinder boring mach	1,000
37 in., Baush vert. boring mill	1,100

PUNCH PRESSES.

Foot press	$17.50
R. & K. No. 2	$ 125
R. & K., saddle press, 25 ton	150
Niagara No. 4, inclined	90
R. & K. No. 3, inclinable	175
Stiles No. 3	175
Crosby No. 40, back geared	175
Ferracute, P 3	190
Crosby No. 45	225
B. & O. No. 4, inclinable	270
R. & K. No. 4-0, back geared	300
Ferracute No. DG23, back gear	300
Crosby No. 70	350
Stiles No. 5, back geared	450
Bliss No. 74½, back geared	600
Bliss No. 75½, back geared	850

TURRET MACHINERY.

⅞ in., Bardons & Oliver	$ 190
Pratt & Whitney No. 2	225
⅞ in., Cleveland, automatic	300
⅞ in., Garvin	150
1 in., Windsor	160
1¼ in., Garvin	200
1¼ in., Garvin, plain	140
1½ in., Garvin, plain	140
1½ in., Garvin	190
1½ in., Garvin, back gear	350
2 in., Garvin, double turret	375
1½ in., Pearson	240
2½ in., Pearson, forming mache	425
Pratt & Whitney No. 2½	275
Pearson, screw machine	375
3 in., Garvin, forming machine	350
16 in., American Fox lathe	190
Lodge & Davis, screw machine	400

MISCELLANEOUS.

Bolt cutter, Merriman, 1½ in.	$140
Centering machine, Whiton, 3½ in.	45
Cut-off machine, H. & R., 2 in.	40
Hammer, drop, Bliss, 100 lbs	50
Hammer, Kane & Roach, 60 lbs.	125
Hammer, drop, Mossberg, 200 lb.	225
Hammer, drop, P. & W., 1,000 lb.	800
Keyseater, Morton, 18 in.	150
Lathe, pulley, Pond, 30 in.	300
Lathe, pulley, Stevens, 36 in.	525
Pipe cutter, roller, B. & K. No. 4.	40
Profiler, W. & S.	225
Profiler, Garvin	250
Punch & shear, Long & A. No. 8	65
Reaming stand, Flather No. 2	50
Shear, rotary, Bliss No. 107	125
Tube cutter, Fox, 1½ in.	15

SECOND-HAND MACHINERY

FOR SALE BY

Chas. Federspil Machinery Co., . 238 Broadway, Cincinnati, O.

DRILLS.

38 in., adjustable head, back geared, square base
22 in., Champion, power, post.
10 and 11 in., Carroll & J., sensitive.
30 in., Aurora, adjustable head.
21 in., Aurora, stationary head.

LATHES.

22 in. x 12 ft., Pond.
20 in. x 8 ft., Flather.
20 in. x 12 ft., Gray.
20 in. x 12 ft., Fifield.
18 in. x 8 ft., Perkins.
16 in. x 6 ft., plain.
9 in. x 40 in., C. & J., foot power.
36 in., Stevens, pulley lathe.

SHAPERS.

16 in., Kelley.
16 in., Sheppard.

Robinson No. 4 punch, Connersville vertical blowers Nos. ½ and 3, anvils, portable forges, steam pumps, 3 to 25 h. p. gas or gasoline engines, fireproof safes, one 8-ton Maris carriage hoist.

FOR SALE BY

Belting & Machinery Co., . 299-303 State St., Rochester, N. Y.

ENGINES.

10x12, Heald, center crank.
11x16, Woodbury, side crank.
14x24, Buckeye.
20x24, Woodbury, side crank.
9 h. p. Truscott, gasoline, marine.
18 h. p. Foos, gasoline engine.

LATHES.

15x6, Porter.
15x6, Draper.
16x8, Pond.
20x6, Ames.
B. & S., polishing and finishing.

MISCELLANEOUS.

Elevator, electric, Graves, direct connected, 2,500 lbs.
Fan, Sturtevant, direct connected, 80 in., 36 in. inlet, 30 in. outlet.
3 Hydraulic presses, 30, 60 & 80 tons.
Shaper, Steptoe, 15 in.
Planer, Whitcomb, 24x24x6.

All kinds of second-hand machinery bought and sold.

FOR SALE BY

O. L. Packard Machinery Co., . Chicago, Ill., and Milwaukee, Wis.

LATHES.

13 in. x 5 ft.
14 in. x 6 ft., Prentiss.
14 in. x 6 ft., Putnam.
16 in. x 6 ft., Lodge & Davis.
16 in. x 6 ft., Prentice.
16 in. x 6 ft., Walcott.
18 in. x 8 ft., American.
18 in. x 8 ft., Fifield.
18 in. x 12 ft., Blaisdell.
20 in. x 14 ft., Bradford.
20 in. x 14 ft., Springfield.
24 in. x 16 ft., New Haven.
28 in. x 12 ft.

PLANERS.

16x16 in. x 4 ft.
24x24 in. x 6 ft.
30x26 in. x 7 ft.

MILLERS.

Garvin No. 4.

MISCELLANEOUS.

Bending rolls, power, 33 in.
Centering machine.
Cold saw, circular, small.
Drill, 3 spindle, heavy pattern.
Drill, suspension.
Grinder, drill, Washburn.
Riveter, adt. ½ in.

SECOND-HAND MACHINERY

FOR SALE BY

The H. A. Stocker Machinery Co., . 20-22 S. Clinton St., Chicago.

PLANERS.

16x16 in. x 3 ft., New Haven.
20x20 in. x 4 ft., Pratt & Whitney.
22x22 in. x 5 ft., Wheeler, equal to new.
22x22 in. x 5 ft., Flather, good as new.
24x24 in. x 8 ft., Putnam, fine order.
26x26 in. x 8 ft., Wheeler, like new.
26x26 in. x 8 ft., Lodge & Davis.
30x30 in. x 8 ft., Flather, 2 heads.
32x32 in. x 10 ft., Lodge & D., 2 hds.
36x30 in. x 8 ft., Smith-Silk, 1 head.

SHAPERS.

16 in., Cincinnati, equal to new.
20 in., Hendey.
24 in., Flather, swivel table, power down feed, good as new.
24 in., Hendey.
26 in., Smith-Mills, fine order
34 in., Walcott, fine order.

MILLING MACHINES.

Becker-Brainard No. 5 C.
Cincinnati No. 1, swivel table.
Garvin No. 3, plain, back gear.
Garvin No. 2, Lincoln pattern.
Garvin No. 3, hand.
Kempsmith No. 10, hand.
Garvin No. 11, hand.
Pratt & W. No. 2, Lincoln pattern.

DRILLS.

15 in., Aurora, bench.
24 in., Prentice, sliding head.
26 in., Barnes, sl. head, back gear.
28 in., Blaisdell, sl. head, back gear.
40 in., Aurora, sl. hd., b. g., p. f.
5 ft., Niles, radial, semi-universal.
Woodward & Rogers, 1 spindle.
Woodward & Rogers, 2 spindle.
Garvin, 6 spindle.
Pratt & Whitney, 6 spindle.

LATHES.

9 in. x 4 ft., Shephard.
10 in. x 4 ft., Seneca Falls.
10 in. x 5 ft., Davis.
14 in. x 6 ft., Reed, cp. rest and taper.
16 in. x 8 ft., Fitchburg.
17 in. x 7 ft., Blaisdell.
18 in. x 10 ft., Greaves-Klusman, c. r.
18 in. x 12 ft., New Haven.
20 in. x 16 ft., Union Machine Co.
21 in. x 10 ft., Flather, comp. rest.
21 in. x 10 ft., Fitchburg, compound rest.
22 in. x 14 ft., Walcott, comp. rest.
24 in. x 14 ft., Union Machine Co., compound rest.
24 in. x 26 ft., shafting, with shafting outfit.
28 in. x 16 ft., Putnam, comp. rest.
36 in. x 24 ft., Union Machine Co., engine.

SCREW AND TURRET MACHINES.

12 in., Lodge & Davis, turret lathe.
16 in., Garvin, turret lathe.
16 in., Lodge & Davis, turret lathe.
16 in., Warner & S., turret lathe.
18 in., Fitchburg, chucking lathe.
20 in., Bridgeport, chucking lathe.
21 in., Gisholt, turret lathe.
48 in., turret chucking machine.
1¾ in., Warner & Swasey, screw machine.
Bardons & O. No. 5, screw machine.
Lodge & D. No. 7, screw machine.
Lodge & D. No. 3, screw machine.
Pratt & W. No. 2, screw machine.

KEY-SEATERS.

Baker Bros. No. 2.
Davis Machine Co. No. 2.

BORING MILLS.

44 in., Rogers, 1 regular and 1 swivel head, 3 jaw univ. chuck in table.
30 in., Warner & Swasey, turret hd.

MISCELLANEOUS.

Bolt cutter, Merriman, 2½ in.
Bulldozer, Williams & White No. 3.
Bulldozer, Williams & White No. 5.
Cutter grinder, Brown & Sharpe No. 3, universal.
Furnace, Bradley No. 9.
Furnace, gas, Stewart.
Gear cutter, Walcott, 20 in., semi-automatic.
Grinder, Brown & Sharpe No. 3, universal.
Grinder, Diamond No. 1, universal.
Grinder, Detroit, 2 in. spindle.
Hammer, helve, Bradley, 60 lbs.
Hammer, drop, Mosberg, automatic, 200 lbs.
Lathes, brass, American.
Press, power, Crosby No. 5, geared.
Press, power, Toledo No. 32.
Press, power, Toledo No. 23.
Profiler, Garvin, single spindle.
Tapping machine, vertical.

SECOND-HAND MACHINERY

FOR SALE BY

Chandler & Farquhar Co., . 34-38 Federal St., Boston, Mass.

Bending roll, Perkins No. 6, capacity ½ in.
Drill, Barnes, upright, 26 in., complete.
Shaper, friction, Hendey, 15 in.
Shaper, friction, Putnam, 24 in.
Shear, squaring, Niagara No. 372, 6 ft.

FOR SALE BY

The Randle Machinery Co., . 1739 Powers St., Cincinnati, O.

ENGINES—CORLISS AND AUTOMATIC.

20x48, Wheelock, single.
20x48, Wheelock, double.
18x36, Wright, single.
16x42, Hamilton, single.
16x32, Buckeye.
16x16, Ball & Wood.
14x14, Ball & Wood.
11x16, Atlas.

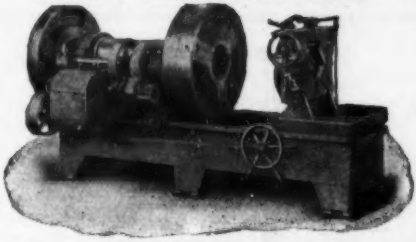
Throttling engines—H. S. & G., 18x22; Skinner, 14x18, and smaller sizes.
Boilers—Tubular, from 200 h. p. to 6 h. p.; fire box, from 50 h. p. to 10 h. p.; vertical, from 15 h. p. to 1 h. p.
Lathe, Star, hollow spindle, 32 in. x 10 ft.
Planer, New Haven, single, 33x39 in. x 9 ft.
Shaper, Steptoe, geared, 24 in.

For Second-Hand Iron-Working Tools

this department affords the best advertising in the world. It reaches more users of such machinery than all other available mediums combined, and it presents the information the buyer seeks in such convenient shape that he can find it promptly and without undue effort. In no other publication are advertisements of such machinery so carefully arranged and printed.

OUR PIPE THREADING MACHINES

are built for hard, rapid work, and lots of it. They are MODERNIZED



All Sizes from ¼ Inch to 12 Inch. Belt and Motor Driven

—SEND FOR THE BOOK—

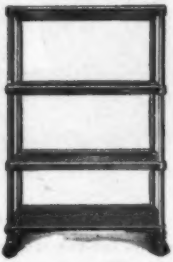
The Stoever Foundry & Mfg. Co.

Myerstown, Pa.

Machinery Wanted

The attention of machinery users is directed to the slip which is enclosed in each copy of the **Machine Tool List,** headed "Memorandum of Machinery Wanted." This affords a convenient method of reaching all advertisers with an inquiry for what you want, as the publisher forwards direct to each advertiser a copy of all such inquiries received.

GOOD SHELVING



FOR YOUR SHOP

This is an economy in the same sense that a good tool is—it saves men's time, and that is money to you. The "New Britain" cast iron shelves are made of various dimensions, and are fitted and mounted to suit your special requirements. Ample in strength for any load, absolutely fire proof, this shelving will improve the character and security of your plant and make for neatness, order and effective work beyond your expectations.

Our Shop Furniture Bulletin is ready for you. May we send it?

THE NEW BRITAIN MACHINE CO.

60 Chestnut St., NEW BRITAIN, CONN.